

JONATHAN HUTCHINSON: THE LAST OF THE MULTISPECIALISTS*

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The trend towards specialism in medicine was probably initiated and is certainly maintained by the belief that the human mind is incapable of becoming truly learned in more than one branch of the science. If this theory applies to the medical minds of the twentieth century, should it not apply with even more force and accuracy to those of the nineteenth? The men of that period strengthened the old bases of medicine, replacing them often enough with entirely new foundations. Then they erected with speed and precision that edifice upon which we of the twentieth century work our leisurely alterations and occasional refinements. It is interesting and may be salutary to recall that a man, who was born in the second decade of the nineteenth century and who died in the second decade of the twentieth, was capable of acquiring enough medical knowledge to justify his inclusion as a specialist in three divisions of medicine.

Jonathan Hutchinson was born at Selby, Yorkshire, in 1828, into the pious atmosphere that enveloped the Society of Friends. His family had him educated at home by a Quaker governess until he was seventeen years old at which time he was apprenticed to a Quaker surgeon, who was also a Quaker preacher, in York. In 1850 he went to St. Bartholomew's in London. He lived quietly and frugally, coached medical students and made a virtue of necessity by praising his diet, a regimen of dried figs and bread. The catholicity of his interest was already becoming apparent. In 1856 he wrote on a new staff for performing lithotomy; in 1860 on inherited syphilis in the eye; and in the same year a chapter on Surgical Diseases of Women in Holmes' System of Surgery. He married a Quaker girl in 1856, and lived first in Reigate, then in Finsbury Circus. Sixteen years later the enormous increase in his practice

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made it necessary for him to move to larger and better quarters in Cavendish Square.

Ophthalmology: The science of ophthalmology attracted him from the first. He joined the staff at Moorfields in 1862 and became a close friend and associate of Nettleship, who was to write his obituary. It was during his connection with Moorfields that he made the discovery that interstitial keratitis is a symptom of hereditary syphilis. To this symptom he later added notched teeth and labyrinthine disease to complete "Hutchinson's Triad." He wrote on the dental defects observed in children who have had convulsions and who also have lamellar cataract, on tobacco amblyopia, hemorrhagic retinitis, and the relation of gout to diseases of the eye.

Syphilis: It was probably his consuming interest in syphilis, the great simulator of other diseases, which led him into the field of other specialties. He published his great work on this disease in 1887, and brought out a revised and enlarged edition in 1909. He ascribed syphilis to a living and specific organism, the discovery of which, he said, "is in reserve for some future investigator." Eighteen years later, when his views were vindicated by the demonstration of the spirochaeta pallida, he was unmoved. He somewhat tartly observed, "To those minds incapable of accepting as proven anything not actually demonstrated, the discovery is invaluable. . ."

Dermatology: From syphilology to dermatology was a necessary and inevitable step. He collected and described all the rare cases that came to his service at the Hospital for Diseases of the Skin, in Blackfriars Road; and made sketches and models that still exist, as valuable today as they were fifty years ago. A well-known dermatologist writes, "Hutchinson was undoubtedly the first to describe the clinical feature of many now well-recognized dermatoses. . . Most of these conditions were subsequently described and worked out under other names, and only afterward was it found out that they were previously described by Hutchinson."

Neurology: Hutchinson's only real claim to being a neurologist arises from his familiarity with syphilis, which naturally brought him into frequent contact with diseases of the nervous system. Indeed, one of his biographers believes that his only contribution was his undoubted influence on the mind of Hughlings Jackson, but this, in itself, was no small contribution. In any case, Hutchinson's insistence upon the routine use of the ophthalmoscope in neurologic examination laid the foundation for a great advance in neurologic diagnosis.

Surgery: In his general surgical service at the London Hospital he was in charge of 60 beds, and was acknowledged one of the leading surgeons of London. He was not a rapid or spectacular operator, but calm, sure, and safe. He wrote, *inter alia*, on separation of the epiphysis, head injuries, diseases of the tongue, amputations, melanosis, and intussusception. His attainments were recognized in 1888 by his election to the presidency of the Royal College of Surgeons.

Hutchinson's interest in museums arose from his ideas of objective teaching. At the meeting of the British Medical Association in 1868 he suggested that an annual exhibition of models and demonstrations be arranged to mark the year's progress. From this suggestion has arisen the system of scientific and commercial exhibits which are now so valuable a part of medical conventions.

The museum in his country home at Haslemere began as a result of his interest in geology, archeology, and natural history. Space was allotted to each century, and in this space exhibits illustrating the important events and discoveries of that century were grouped. The museum soon outgrew his home and moved to larger quarters in the village. He here carried on his famous Saturday and Sunday lectures which he was to continue as long as he lived. Hutchinson also founded a similar museum at his birthplace, Selby, but this never attained the size or importance of the establishment at Haslemere, which has now become a national institution.

Less enduring but none the less important was the New Sydenham Society which Hutchinson founded in 1859 on the death of the old society of the same name. When it ceased to function in 1906 it had published, at a moderate price to subscribers, nearly 200 volumes of translations, atlases, and essays.

His private clinical museum he attempted to convert into a nucleus for postgraduate medical education in London, where this type of instruction was, strangely enough, practically non-existent at this time. Successful at first, the project soon succumbed before the hostility of the medical profession. Once again Jonathan Hutchinson was ahead of his time.

Hutchinson as a man: In evaluating the significance of Hutchinson, his character, and the rôle he played, it is advisable to consider him against the background of the age in which he lived. He appeared upon the scene just as improvement in man's mechanical knowledge was initiating the economic change that we have come to know as the Social Revolution. The advent of steam engines had made possible improvements in transportation which brought closer the peoples of the world, facilitating easy exchange of goods and ideas. The First Reform Bill was being passed, Trade Unionism was beginning to rise, and Karl Marx was giving the initial impetus to a movement that was to play a tremendous rôle in the politics of the world. All this prepared the way for the shattering impact of Darwinism on the religious ideas of mankind. A concept of Christianity based upon an ancient Sumerian serpent-legend was shaken to its core by the unanswerable arguments of rock and river bed, of embryo and fossil. The Quaker who had refused to go to the Crimean War because of religious scruples became the friend of Darwin and Huxley and the proponent of their teachings. He was born nine years before Queen Victoria came to the throne. He was actively in practice when Florence Nightingale went to the Crimea. He was full surgeon at the London Hospital before the American Civil War had ended, and

was writing of smallpox in his Atlas while the Franco-Prussian War was proving the value of vaccination. He had been in practice twenty-six years before the telephone was invented, and died, within the memory of us all, just before the Great War began.

In the history of medicine his life occupies a span of similar importance. Aortic regurgitation was first described in the year he was born. He had been in practice a year before Helmholtz discovered the ophthalmoscope and four years before von Graefe introduced the operation of iridectomy for glaucoma. Lord Lister, his friend and classmate, preceded him by one year in birth and in death. In the year that Johns Hopkins was founded Hutchinson was preparing the famous illustrations that have since become a valued possession of that University. The gonococcus, and the bacilli of typhoid, tuberculosis, and diphtheria were discovered between the date that he became a fellow of the Royal College of Surgeons and the time that he became its president. He had been practicing forty-eight years before radium was discovered, and fifty-seven years before the Wassermann test was introduced. He was a contemporary of Graves, Stokes, Bright, Addison, Hodgkin, Paget, Brodie, Bowman, Syme, and Huxley in his own country; and of Skoda, Hebra, Horner, Broca, Sims, His, Claud Bernard, Charcot, and Ehrlich abroad.

The stirring times in which Hutchinson lived must have stimulated a mind naturally alert and an observation phenomenally keen. He took notes on all his cases, and nothing escaped his eyes and hands. His care and industry were amazing. For example, he wished to know if his patients have had gout in the family, and described his method of eliciting information. If the patient denied a family history of gout, he would requestion him on a later date. If the information so obtained was unsatisfactory he would interview the relatives, several times if necessary. By this time the harassed family had probably invented a gouty relative just to be rid of this relentless inquisitor.

Because they are portrayals of the unchanging appearance of disease, Hutchinson's drawings and models are as valuable today as they were fifty years ago, and the accompanying descriptions are peerless. In this connection Osler's words are of interest. "When anything turns up," he said, "which is anomalous or peculiar, anything upon which the text-books are silent and the systems and encyclopedias dumb, I tell my students to turn to the volumes of Mr. Hutchinson's Archives of Surgery, as if it is not mentioned in them it surely is something very much out of the common."

Unfortunately, Hutchinson had the failing of attempting to use his facts to draw entirely wrong conclusions. On one occasion he showed a patient with a skin eruption as a typical example of how syphilis could simulate smallpox. He disregarded the patient's denial of syphilis, only to be disconcerted by the discovery that the patient really did have smallpox. His conviction that leprosy was caused by eating decomposed fish was not shaken by the subsequent discovery of the *lepra bacillus*. To find support for his theory he visited India and Africa, and published his last work on the subject in 1906. This book, a masterpiece of plausibility, almost convinces the reader against his will. He drove his unwilling facts down the straight lane of his theory and, if they proved refractory, clubbed them into line. All of this was undoubtedly due to conviction: dishonesty was not in the man. For example, he was impelled to report in detail his discovery of vaccino-syphilis, despite the recriminations of his colleagues, whom he esteemed, and the plaudits of the anti-vaccinationists, whom he despised. He said, "We cannot ask that vaccination be made compulsory unless we have done everything in our power to make it safe. There is no doubt that the danger of transmitting syphilis is a real and very important one. It can be guarded against only by giving the fullest information regarding it to all the members of the profession, and by attracting their attention to it in the most forcible manner. I should deem my-

self culpable in a high degree if I failed in my duty in this respect." This courageous pronouncement resulted in the manufacture of vaccine from calf lymph, and the elimination of vaccine syphilis.

His prose style was sober, simple and clear but his lectures were enlivened by apt illustration and vivid metaphor. He began one of his talks on dermatology by discussing the various ring formations found in nature, progressing from the "fairy-rings" found in the fields to the circinate eruptions of ringworm. The catholicity of his interests provided a vast storehouse from which non-medical illustrations could be drawn. For outside reading he preferred Shakespeare, Wordsworth, Browning, Darwin and Carlyle, but his knowledge of other literature was wide and exact. For instance, he argued against the contention that syphilis might have originated in the Old World by pointing out that no mention of this disease can be found in Chaucer or Boccaccio. Geology was one of his hobbies and his Sunday afternoon lectures at Haslemere were often ostensibly on this science. Such a mind, however, could not be kept within the bounds of a single subject and one lecture, which he began with a discussion of the earth's crust, went on through a consideration of elephants to a dissertation on John Wesley. He loved animals and plants and his friends rallied him with the accusation that his interest in his cattle and his flowers was enhanced by the fact that they, as well as humans, sometimes suffered from disease. When in his last days it became necessary for him to remain indoors he began to study the tumors on the wood brought to replenish his fire.

At his death in 1913, at the age of 85 he had filled the chair of every important medical society in England, had represented his profession on many Royal Commissions, and had been honored by knighthood and by honorary degrees from great universities. He had reached the top in ophthalmology, dermatology, and surgery, and history will probably pronounce him the greatest syphilographer of all time. Every modern trend in medicine makes it improbable that we shall look upon his like again.